

## CLAIMS

What is claimed is:

- 5 1. A method for determining a light output of a light emitting diode (LED) in a scanner, comprising:
- applying a first current to the LED to generate the light output of the LED during a first time period;
- obtaining a first measure of the light output of the LED during the first time period with a number of sensors in a sensor array;
- 10 applying an altered current to the LED to generate the light output of the LED during a second time period;
- obtaining a second measure of the light output of the LED during the second time period with the sensors in the sensor array; and
- 15 comparing a difference between the first measure of the light output and the second measure of the light output with a predefined difference threshold to detect an optimum light output.
- 20 2. The method of claim 1, further comprising:
- providing an LED current control circuit coupled to the LED; and
- wherein the step of applying the first current to the LED and the step of applying the altered current to the LED further comprise manipulating the LED control circuit to generate the first and altered currents.
- 25 3. The method of claim 1, further comprising incrementing the first current by a predefined amount to obtain the altered current.
- 30 4. The method of claim 1, further comprising decrementing the first current by a predefined amount to obtain the altered current.

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5. The method of claim 1, wherein the step of comparing the difference between the first measure of the light output and the second measure of the light output with the predefined difference threshold to detect the optimum light output further comprises calculating the difference by determining a percent increase of the second measure over the first measure.

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6. The method of claim 1, wherein the step of comparing the difference between the first measure of the light output and the second measure of the light output with the predefined difference threshold to detect the optimum light output further comprises calculating the difference by determining a percent decrease of the second measure relative to the first measure.

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7. A system for determining a light output of a light emitting diode (LED) in a scanner, comprising:

a processor circuit having a processor and a memory;

an LED current control circuit coupled to the processor circuit and the LED;

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current control logic stored on the memory and executable by the processor, the current control logic comprising:

logic for directing the LED current control circuit to apply a first current to the LED for a first time period to generate a first measure of the light output of the LED during the first time period from a number of sensors in a sensor array in the scanner;

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logic for directing the LED current control circuit to apply an altered current to the LED for a second time period to generate a second measure of the light output during the second time period from the number of sensors in the sensor array; and

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logic for comparing a difference between the first measure of the light output and the second measure of the light output with a predefined difference threshold to detect an optimum light output.

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8. The system of claim 7, wherein each of the sensors in the sensor array generate a signal representing the light output of the LED when illuminated thereby.

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9. The system of claim 7, wherein the current control logic further comprises logic for incrementing the first current by a predefined amount, thereby generating the altered current.

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10. The system of claim 7, wherein the current control logic further comprises logic for decrementing the first current by a predefined amount, thereby generating the altered current.

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11. The system of claim 7, wherein the logic for comparing the difference between the first measure of the light output and the second measure of the light output with the predefined difference threshold to detect the optimum light output further comprises logic for calculating the difference by determining a percent increase of the second measure over the first measure.

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12. The system of claim 7, wherein the logic for comparing the difference between the first measure of the light output and the second measure of the light output with the predefined difference threshold to detect the optimum light output further comprises logic for calculating the difference by determining a percent decrease of the second measure relative to the first measure.

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13. A system for determining a light output of a light emitting diode (LED) in a scanner, comprising:

means for applying a first current to the LED for a first time period to generate a first measure of the light output of the LED from a number of sensors in a sensor array during the first time period;

means for applying an altered current to the LED for a second time period to generate a second measure of the light output from the sensors in the sensor array during the second time period; and

means for comparing a difference between the first measure of the light output and the second measure of the light output with a predefined difference threshold to detect an optimum light output.

14. The system of claim 13, wherein the sensors generate a signal representing the light output of the LED when illuminated thereby.

15. The system of claim 13, further comprising means for incrementing the first current by a predefined amount to obtain the altered current.

16. The system of claim 13, further comprising means for decrementing the first current by a predefined amount to obtain the altered current.

17. The system of claim 13, wherein the means for comparing the difference between the first measure of the light output and the second measure of the light output with the predefined difference threshold to detect the optimum light output further comprises means for calculating the difference by determining a percent increase of the second measure over the first measure.

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18. The system of claim 13, wherein the means for comparing the difference between the first measure of the light output and the second measure of the light output with the predefined difference threshold to detect the optimum light output further comprises means for calculating the difference by determining a percent decrease of the second measure relative to the first measure.

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19. A method for determining a light output of a light emitting diode (LED) in a scanner, comprising:

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providing an LED current control circuit coupled to the LED;

providing a number of sensors in a sensor array, the sensors

generating a signal representative of the light output of the LED when illuminated thereby;

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manipulating the LED current control circuit to apply a first current to the LED for a first time period to generate the signal representing a first measure of the light output of the LED from each of the sensors during the first time period;

manipulating the LED current control circuit to apply an altered current to the LED for a second time period to generate a second signal representing a second measure of the light output from each of the sensors during the second time period; and

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comparing a difference between the first measure of the light output and the second measure of the light output for each of the sensors with a predefined difference threshold to detect an optimum light output for each of the sensors.

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20. A system for determining a light output of a light emitting diode (LED) in a scanner, comprising:

an LED current control circuit coupled to the LED;

5 a number of sensors in a sensor array, the sensors generating a signal representative of the light output of the LED when illuminated thereby;

a processor circuit having a processor and a memory;

current control logic stored on the memory and executable by the processor, the current control logic comprising:

10 logic to direct the LED current control circuit to apply a first current to the LED for a first time period to generate a signal representing a first measure of the light output of the LED from each of the sensors during the first time period;

15 logic to direct the LED current control circuit to apply an altered current to the LED for a second time period to generate a second signal representing a second measure of the light output for each of the sensors during the second time period; and

20 logic to compare a difference between the first measure of the light output and the second measure of the light output for each of the sensors with a predefined difference threshold to detect an optimum light output for each of the sensors.

FOI 50-8025560

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